

**Amendments to the Drawings**

Attached are eleven new sheets of drawings: Figures 1, 2, 3a, 3b, 4a, 4b, 5a, 5b, 6a, 6b, 7a, 7b, 8, 9a, and 9b.

Attachment: New sheets (11 pgs.)

## **REMARKS**

### **Administrative Overview**

As initially filed, claims 1–14 were presented for examination. In a preliminary amendment, claims 8–14 were cancelled and claims 15–23 were added. In the instant office action, claims 1–7 and 17–21 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 6,064,786 to Cunningham et al. (hereinafter “Cunningham”). Claims 15, 16, 22, and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Cunningham in view of United States Patent No. 6,525,853 to Stuart (hereinafter “Stuart”).

We hereby amend the claims and respectfully request reconsideration in light of the arguments below. Claims 1, 4, and 5 have been amended. Claims 7 and 17-23 have been cancelled. Claims 24 and 25 have been added. Support for these amendments may be found throughout the application as filed. After the entry of these amendments, claims 1–6, 15, 16, 24 and 25 will be pending.

Each of the outstanding rejections is addressed in the order in which it appears in the Office Action.

### **Interview Summary**

The Applicants thank the Examiner for the courtesy of the telephonic interview of July 1, 2008. At the interview, the preceding amendments to the pending claims were discussed. In particular, the claims as proposed to be amended were said to overcome the primary reference, Cunningham, and additionally to be non-obvious over Cunningham.

### **The Drawings, as Amended, Comply with 37 C.F.R. § 1.121(d)**

The drawings were objected to because Figs. 1, 4a, 4b, 5b, and 8 were said to contain excessive shading. We respectfully submit that the amended drawings address this objection and respectfully request its withdrawal.

### **The Claims, as Amended, are Patentable over Cunningham**

Both of the independent claims currently pending in this case, i.e., claims 1 and 4, stand rejected under 35 U.S.C. § 102(b) as being unpatentable over Cunningham. The remaining dependent claims were either rejected under 35 U.S.C. § 102(b) as being unpatentable over

Cunningham, or under 35 U.S.C. § 103(a) as being unpatentable over Cunningham in view of Stuart.

A proper rejection for anticipation requires the inherent or express description of each and every element of a claim in a single prior art reference. MPEP § 2131. The Applicants respectfully submit that Cunningham does not teach or suggest all of the limitations of amended independent claims 1 and 4 and therefore does not legally anticipate these claims or the remaining claims that depend therefrom.

As amended in this response, both independent claims require the transmission of a combination of modulated baseband and radio frequency signals over a multimode fibre, and the restriction of the number of excited propagation modes within the fibre. Contrary to the Office's claims, Cunningham at no point refers to the transmission of a combination of modulated baseband and radio frequency signals over a multimode fibre. The Office Action pointedly fails to cite to any section of Cunningham in support of this claim, most likely because such support does not exist in the Cunningham reference.

It is apparent that Cunningham is directed to the problems of modal dispersion and modal noise. Cunningham teaches that the use of an offset launch increases the distance that information can be transferred in a multi-mode fibre, relative to the distance possible using a conventional over-filled launch. There is no teaching of the use of a combination of electrically modulated radio frequency signals and baseband signals, as Cunningham is directed to the transfer of high data rate LAN signals. Cunningham at col. 1, ln. 20-25.

Moreover, one of ordinary skill would not attempt to send both modulated radio frequency and baseband signals over a single multi-mode fibre. One of ordinary skill would expect that the light from the two signals would interact in such a way as to effectively impede each other, and that modal dispersion and modal noise would prevent successful transmission of both signals.

The inventors in this case have made this combination and, through study of the resulting noise effects, they have determined that the noise problem may be addressed by restricting the modes launched into the fibre. Accordingly, both independent claims 1 and 4 also require the restriction of the number of excited propagation modes within the fibre.

For these reasons, we submit that Cunningham fails to teach or suggest all of the elements present in Applicants' independent claims 1 and 4. Therefore, we respectfully submit

that independent claims 1 and 4, and the remaining claims which depend therefrom, are patentable over Cunningham.

**CONCLUSION**

In light of the foregoing, we respectfully submit that all of the pending claims are in condition for allowance. Accordingly, we respectfully request reconsideration, withdrawal of all grounds of rejection, and allowance of all of the pending claims in due course.

If the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting the allowance of this application, the Examiner is invited to call the undersigned at the number identified below.

Respectfully submitted,

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